



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/439,320 11/12/99 MOSS

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QM02/0305

PATENT DOCKET ADMINISTRATOR  
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EXAMINER

KWON, J

ART UNIT

PAPER NUMBER

3747

DATE MAILED: 03/05/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.  
09/439,320

Applicant(s)  
Moss et al

Examiner  
Kwon, John

Group Art Unit  
3747



☒ Responsive to communication(s) filed on Dec 27, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1 and 3-20 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1 and 3-20 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been  
☐ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## **DETAILED ACTION**

### ***Housekeeping***

Applicant(s) is(are) suggested to list a current telephone number, a facsimile number and a list of the attachments, if any, under the signature of the attorney/applicant for each response to the Office action(s) in order to expedite and make accurate the prosecution of the application.

1. The submission of the Information Disclosure Statement dated November 12, 1999 and July 6, 2000 has been received and fully considered. No further Information Disclosure Statement is in the records.

### ***Drawings***

2. The submission of the formal drawings is approved.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3, 4 and 9 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by the Liskow (US 5,464,319).

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5. Claims 1, 3-9 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Beare (US 3,536,412).

✓ 6. Claims 1, 3-9 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by USSR Parent 724,800.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 5, 6, 7 and 10-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liskow (US 5,464,319). Liskow discloses an impeller located between two radially separable walls of a regenerative type fuel pump. One of the cross-sectional area of the chamber is greater than that at the outlet area (Col. 3, lines 23-42). The differences between the prior art reference and the instant invention are the shape of the flow path (i.e., asymmetrically in the first/second side of the wall and a ring shape), the specific reduction between the inlet area and the outlet area. It would have been considered to be an obvious choice of mechanical design because one skilled in this art is familiar with basic fluid mechanic and normally has the laboratory test facilities. To optimize or select the suitable shape of the chamber, flow path reduction between the inlet area and the outlet area would be within the ability of ordinary skilled in this art.

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9. Claims 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beare (US 3,536,412). Beare discloses an open type of impeller encompassed within the chambers. The cross-section of the chamber is reducing from an inlet open to an outlet opening gradually. The differences between the prior art reference and the instant invention is the specific reduction between the inlet area and the outlet area. It would have been considered to be an obvious choice of mechanical design because one skilled in this art is familiar with basic fluid mechanic and normally has the laboratory test facilities. To optimize or select the suitable shape of the chamber, flow path reduction between the inlet area and the outlet area would be within the ability of ordinary skilled in this art.

10. Claims 10-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over USSR Parent 724,800. The USSR Parent discloses an open type of impeller encompassed within the chambers. The cross-section of the chamber is reducing from an inlet open to an outlet opening gradually. The differences between the prior art reference and the instant invention is the specific reduction between the inlet area and the outlet area. It would have been considered to be an obvious choice of mechanical design because one skilled in this art is familiar with basic fluid mechanic and normally has the laboratory test facilities. To optimize or select the suitable shape of the chamber, flow path reduction between the inlet area and the outlet area would be within the ability of ordinary skilled in this art.

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### ***Response to Arguments***

11. Applicant's arguments with respect to claims 1 and 3-20 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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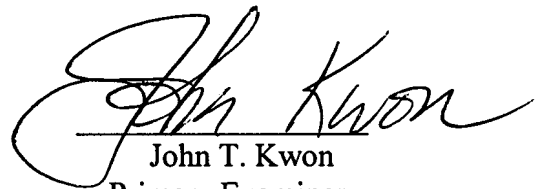
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***Contact Information***

Any inquiry concerning this communication should be directed to Examiner Kwon at telephone number (703) 308-1046 and facsimile numbers (703) 305-3588. The examiner can normally be reached on Monday thru Friday from 8:30 AM to 5:00 PM.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0861.

A handwritten signature in black ink, appearing to read "John T. Kwon", is written over a horizontal line.

John T. Kwon  
Primary Examiner  
Art Unit 3747

March 2, 2001

Enclosure(s);

See the attachment(s) section of the Office Action Summary.